DOCUMENT RESUME

ED 263 431 CE 042 979

TITLE	Math on the Job. Cashier.
INSTITUTION	Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY	Office of Special Education and Rehabilitative Services (ED), Washington, DC.
PUB DATE	85
GRANT	G008300003
NOTE	28p.; For the other booklets in this series, see CE 042 963-994.
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Career Awareness; Career Education; *Disabilities; Emotional Disturbances; *Employment Qualifications; Enrichment Activities; Learning Disabilities; *Mathematics Skills; Mental Retardation; *Occupational Information; Problem Solving; Secondary Education; Skill Development; Special Education; *Work Environment
IDENTIFIERS	*Cashiers

ABSTRACT

This booklet is intended to help mainstreamed mentally retarded, emotionally disturbed, or learning disabled high school students acquire a basic understanding of the responsibilities and working conditions of cashiers and to practice basic math skills necessary in the occupation. The first section provides a brief introduction to the occupation by focusing upon those job tasks of a cashier with which the student is likely to be familiar. The next two sections deal with the work environment of the typical cashier and the training, education, and experience needed for the occupation. Exercises addressing basic math skills used by cashiers are provided. Various suggestions are listed for students interested in further exploring the occupation of cashier. A glossary and answer sheet conclude the booklet. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED263431

MATH on the job

Cashier

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

H Dunn

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE042979

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION

THE NATIONAL CENTER MISSION STATEMENT

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Providing information for national planning and policy
- Operating information systems and services
- Conducting leadership development and training programs

MATH ON THE JOB:

CASHIER

Copyright © 1985. The National Center for Research in Vocational Education of The Ohio State University. All Rights Reserved.

This publication was prepared pursuant to a grant from the Office of Special Education and Rehabilitation Services, U.S. Department of Education. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.

MATH on the job

Cashier

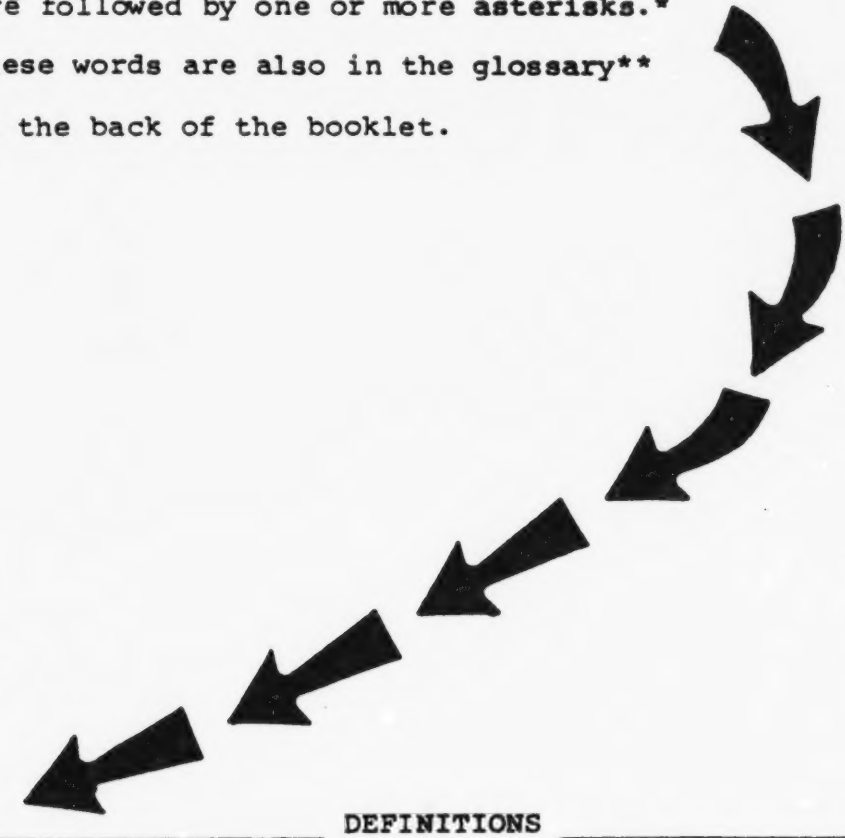
In this booklet, you can--

- find out what a cashier does
- see how a cashier uses math
- get a chance to use math as a cashier
- find out the types of things a cashier needs to know
- find out what courses, training, and experience you need to become a cashier

SPECIAL WORDS USED IN THIS BOOKLET

Workers in many jobs use special words or special meanings for words. Learning these words helps you to learn about a job.

You will find some of these special words in this booklet. When these words, and some hard words, are used for the first time, they are followed by one or more **asterisks.*** These words are also in the **glossary**** at the back of the booklet.



DEFINITIONS

*An asterisk (*) is a symbol that tells you to look at the bottom of the page for the meaning, or definition, of the word.

**A glossary is a list of words with their meanings.

CONTENTS

HAVE YOU EVER? 1

WHAT DOES A CASHIER DO? 2

WHERE DOES A CASHIER WORK? 8

WHAT TRAINING, EDUCATION, AND EXPERIENCE DO YOU NEED TO BECOME A CASHIER? 13

DO YOU WANT TO DO MORE CASHIER'S MATH? 15

DO YOU WANT TO EXPLORE SOME MORE? 17

GLOSSARY 19

ANSWER SHEET 20

HAVE YOU EVER...

- counted the coins saved in a "piggy bank?"
- sold cookies, candy, or other items for your school?
- used a pocket calculator or adding machine?
- watched a grocery checker use a cash register?
- listened to a ticket seller count a customer's change?
- watched a salesclerk accept payment by check or credit card?

If you have, then you have some idea about the work of a cashier. This booklet will help you learn more about the work of a cashier and how math is important to do the job.

WHAT DOES A CASHIER DO?

A cashier's main task is to accept payment from customers for items sold or services provided. How does a cashier do this? As a cashier, you--

- find how much sales tax to charge the customer
- total the amount of the customer's bill
- operate the cash register
- accept payment from the customer
- give the customer change
- give the customer a **receipt***

As a cashier, you may also--

- prepare bank deposits
- prepare sales tax reports
- take telephone reservations
- wrap **merchandise****
- balance the cash drawer

DEFINITIONS

*A <u>receipt</u> is a written or printed statement that shows how much was paid for a product or service.

**<u>Merchandise</u> is the goods or items that are for sale.

A cashier uses math on the job every day. As a cashier, you will--

- read, write, and copy whole numbers and decimals
- add, subtract, multiply, and divide
- count money
- use percentages
- figure out how much is owed
- write receipts
- compare the amount owed to the amount paid
- determine the exact difference between two amounts
- make change
- balance the cash drawer
- apply a **discount*** to, or **mark down****, prices
- **mark up***** prices
- correct a bill by adding or subtracting to get an **adjusted balance******

DEFINITIONS

*A **discount** is the amount of money subtracted from the price of an item.

To **mark down is to lower prices

***To **mark up** is to increase prices.

****An **adjusted balance** is the total amount owed after purchases and payments have been made.

A cashier uses math to give customers change.

EXAMPLE

As a cashier, you will receive customers' payments for merchandise. It is very important that you give the customers the correct amount of change. You should never give customers too much or too little change. Let's assume you are a cashier in a restaurant. A customer owes you $31.63 and gives you two twenty-dollar bills. How much change would you give the customer? Subtract the amount owed from the amount given to you.

$40.00 - 31.63 = $8.37

The amount of change is $8.37.

NOW YOU TRY IT

Practice Exercise A

How much change should you give each customer?

	Amount owed	Amount given	Amount of change
1.	$12.48	$15.00	?
2.	$56.33	$57.00	?
3.	$ 8.92	$20.00	?
4.	$20.05	$20.10	?
5.	$ 4.12	$10.00	?
6.	$ 8.96	$20.01	?
7.	$39.06	$40.10	?

A cashier uses math to figure out how much sales tax is owed.

EXAMPLE

Sales tax is charged on the purchase of many items. Sometimes, you will need to calculate how much sales tax to charge.

How much sales tax does a customer owe on a purchase of $54.63? To calculate the sales tax, follow these steps:

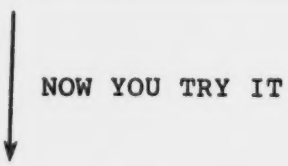
Step 1. Find out what the local sales tax rate is. For this example, assume that the tax rate is 5.5%.

Step 2. Multiply the merchandise total by the tax rate.

54.63 X .055 = $3.00465

Step 3. Round the result to the next highest cent. For this example, round $3.00465 to $3.01.

The customer owes $3.01 in sales tax.



Practice Exercise B

How much sales tax does each customer owe?

	Amount of Merchandise	Sales Tax Rate	Amount of Sales Tax
8.	$125.43	3%	?
9.	$264.12	6%	?
10.	$310.68	5.5%	?
11.	$588.25	6.5%	?
12.	$435.92	8%	?

A cashier uses math to figure mark-down prices.

EXAMPLE

One way to interest customers in buying merchandise is to lower the prices or put the items on sale. Sale prices are often determined as a percent off the regular price. Let's assume that a customer is buying an item that is on sale for 20% off the regular price. The regular price is $29.83. To find the reduced price, follow these steps:

Step 1. Change the percentage to a decimal by dividing the percentage by 100.

$$20\% \div 100 = .20$$

Step 2. Multiply the regular price by the decimal amount. Round the result to the nearest cent. The result is how much you will subtract from the regular price.

$$\$29.83 \times .20 = \$5.97$$

Step 3. Subtract that amount from the regular price. The difference is the sale price.

$$\$29.83 - 5.97 = \$23.86$$

The sales price is $23.86.

NOW YOU TRY IT

Practice Exercise C

What is the reduced price for the following items?

	Regular Price Of Merchandise	Percentage Off	Reduced Price
13.	$112.43	10%	?
14.	$ 10.83	30%	?
15.	$ 48.22	25%	?
16.	$ 65.98	50%	?
17.	$ 18.76	45%	?

A cashier uses math to total customers' bills.

EXAMPLE

Let's assume that you are a cashier in a restaurant. The waiters and waitresses write the customers' orders on a piece of paper. The customers bring the bill to you. To figure out how much a customer owes, do the following steps:

Step 1. Add the amounts for all the items. For this example, let's assume the customer ordered--

2 cheeseburgers at $2.75 each	= $5.50
2 french fries at $0.95 each	= $1.90
1 large milk at $1.00 each	= $1.00
1 large iced tea at $0.85 each	= $0.85
	$9.25

Step 2. Figure out how much sales tax is owed. For this example, assume that the sales tax rate is 6%.

$9.25 x 6% = $0.56

Step 3. Add the sales tax to the food total.

$9.25 + $0.56 = $9.81

The customer owes $9.81.

NOW YOU TRY IT

Practice Exercise D

Complete each line of the bill below.

18. 2 medium pizzas at $7.60 each		?
19. 4 Soft Drinks at $0.90 each		?
20.	Subtotal	?
21.	Tax at 6.5%	?
22.	Grand Total	?

WHERE DOES A CASHIER WORK?

A cashier may work in many types and sizes of stores and offices. You may find a cashiering position in a--

- department store
- hotel
- parking lot
- school
- restaurant
- theater
- supermarket
- bank
- sports arena
- bus station

Can you name other places where a cashier would work?

Most cashiers work indoors, if not in a building, then in a booth. Cashiers have to stand or sit for long periods of time. You may have a small work area. In a restaurant or theater, you may work near the entrance. Since you may be exposed to drafts of cold or heat from outdoors, you should be in good health.

The work of a cashier involves doing the same thing over and over again. This poses a challenge to you to stay alert while handling money and to be cheerful while dealing with customers. You must work rapidly and may be under pressure during peak customer periods.

As a cashier, you will work with many people. The types of people you will work with are--

- managers
- co-workers, such as sales clerks, waitresses, and other workers
- customers

The manager is your boss. He or she--

- tells you your regular duties
- gives you special assignments
- helps customers get service
- helps you work out problems that you can't solve by yourself.

Both managers and customers expect cashiers to--

- be helpful
- figure charges correctly
- provide fast service

You may work alone or with other co-workers to give customers good service. If you listen to the manager's directions, you are more likely to do a good job.

As a cashier, you will use many machines and special devices, such as--

- cash registers that print the amount of the sale on a paper tape
- devices that "read" the name and price of a product from a coded label
- calculators* or adding machines
- special computer registers
- credit card imprinting machines**
- ticket machines
- telephones
- switchboards
- typewriters
- automatic change machines

The types of machines and devices you use will depend on the size and type of store or office that you work in. They will also depend on the number of tasks that you must do.

DEFINITIONS

*A calculator is an electronic machine used to perform computations.

**An imprinting machine is a small hand-operated device. By using pressure, the machine transfers information that is on a credit card to a sales slip.

There are many different types of cashiering jobs, such as--

- **box office cashiers** or **ticket sellers** who work in theaters. They operate ticket dispensing machines and answer telephone calls.
- **cashier checkers** who work in restaurants. They make reservations, type menus, and sell items at the candy and cigarette counter.
- **checkout clerks, checkers,** and **grocery clerks** who work in supermarkets or other self-service stores. They may wrap or bag purchases, restock shelves, mark prices, and take inventory.
- **front office cashiers** who work in offices. They type, do bookkeeping, and act as the receptionist.

In all of these jobs, the cashier accepts payment from customers. However, they use different machines and perform different tasks.

IF YOU ARE INTERESTED IN

THE WORK OF A CASHIER

AND WOULD LIKE TO KNOW MORE,

READ ON

WHAT TRAINING, EDUCATION, AND EXPERIENCE DO YOU NEED TO BECOME A CASHIER?

What do you think? Would you like to be a cashier? If you would, there are some things you should know.

You should know how to--

- identify the different kinds of coins and currency
- count money
- make change
- feel comfortable around strangers and be able to talk to them easily
- be polite and friendly
- greet customers with a smile
- be neat and well groomed

You don't need much training to do the job of a cashier but you should be a high school graduate. You must be able to add and subtract quickly. You should be able to communicate clearly and use proper grammar. You also must enjoy working with people. You may find it useful to take business subjects in high school, such as typing, bookkeeping, business arithmetic, and distributive education.

If you would like to get a job as a cashier in a large store, you should apply to the personnel office of the store. You probably will be interviewed and given an **aptitude test.*** After you are hired, you might have to attend a short training program.

If you want to work in a small store, you should apply to the store manager or owner. After you are hired, you will probably be trained on the job.

Often, whichever kind of store you work in, you may have to accept another job to gain experience before becoming a cashier. In a grocery store, for example, you may bag groceries and stock shelves before you can become a cashier. Before or after you become a cashier, what will help you advance? Taking every chance to learn new skills and tasks will help you get a better job and a higher salary. Showing that you have math skills will also help you.

DEFINITION

*An <u>aptitude test</u> is a series of questions that test your abilities, interests, and talents.

DO YOU WANT TO DO MORE CASHIER'S MATH?

Practice Exercise E

How much change should you give each customer?

	Amount Owed	Amount Given	Amount of Change
23.	$ 2.81	$ 5.00	?
24.	$15.56	$20.00	?
25.	$55.33	$60.00	?
26.	$41.42	$45.00	?
27.	$45.85	$50.00	?
28.	$16.65	$20.75	?
29.	$ 6.30	$10.50	?
30.	$ 8.48	$ 9.03	?
31.	$ 7.34	$10.04	?
32.	$10.11	$15.20	?

Practice Exercise F

How much sales tax does each customer owe?

	Amount of Merchandise	Sales Tax Rate	Amount of Sales Tax
33.	$ 65.43	5.5%	?
34.	$110.82	4%	?
35.	$273.91	3.5%	?
36.	$168.24	6.5%	?
37.	$243.12	5.5%	?

Practice Exercise G

What is the reduced price for the following items?

	Regular Price Of Merchandise	Percentage Off	Reduced Price
38.	$45.85	25%	?
39.	$55.33	42%	?
40.	$81.24	37%	?
41.	$19.42	50%	?
42.	$15.56	20%	?

Practice Exercise H

Complete each line of the bill below.

43.	4 roast beef dinners at $6.25 each	?
44.	4 glasses of milk at $0.80 each	?
45.	Sub-Total	?
46.	Tax at 4.5%	?
47.	Grand Total	?

DO YOU WANT TO EXPLORE SOME MORE?

1. Go to a grocery store with a friend or family member. Observe the cashiers at work. Note how rapidly and correctly they ring up merchandise. What other tasks do they do? Make a list of the things you see them doing.

2. Observe another type of cashier at work, perhaps a box office cashier, bank teller, toll booth operator, or restaurant cashier. Write down the things you see the clerks doing. Notice the number of customers a cashier serves in a fifteen-minute period.

3. Arrange to talk with people employed as cashiers. Ask them what tasks they perform in their work. Ask them how they use mathematics in their work. Ask them what machines they use and how. Find out how they got their jobs and what training they received. Ask why cashiers collect ID card information when a customer pays by check.

4. Look in the newspaper for job ads for cashiers. What types of stores need cashiers? What skills and experience do the ads ask for? How many ads ask for part-time cashiers and how many for full-time? How much does the pay differ for these jobs?

5. Are you interested in other jobs in stores?

   - **Stock clerks** receive and distribute merchandise in a store. They sort and store the goods according to kind or style, size and color. They also keep track of inventory counts.

   - **Baggers** carefully put groceries into sacks or cartons. They push carts of groceries to customers' cars and collect shopping carts from the parking lot. They replace wrapping supplies at the counter and clean the work area. They also may help with pricing and stocking food on shelves.

   - **Ticket takers** at theaters collect tickets and passes from customers. They also have to examine tickets to see if they can be used. They cannot allow customers in who do not have good tickets, proper dress, or good behavior. They may count and record the number of tickets collected.

- **Display persons** set up the merchandise in store windows or on the sales floor. They must make the arrangement of the merchandise look nice. Why? So that the display will attract the customers' attention.

- **Sales clerks** help customers select merchandise to buy. They greet customers and talk to them about the items wanted. They answer questions about the merchandise. They also describe good things about the merchandise to interest the customer. They may, like the cashier, receive payment for the merchandise.

You can do these jobs without all the math skills listed in this booklet. But you can do a better job if you have math skills. You may get a chance to move up to a better job. How? By doing your job well and showing good math skills.

GLOSSARY

Adjusted balance: the total amount owed on an account after purchases and payments have been made.

Aptitude test: a series of questions that test your abilities, talents, and interests.

Asterisk (*): a mark that tells you to look at the bottom of the page for the meaning, or definition, of the word.

Calculator: an electronic machine used to perform computations.

Discount: the amount of money subtracted from the price of an item.

Glossary: a list of words with their meanings.

Imprinting machine: a small hand-operated device. By using pressure, the machine transfers information that is on a credit card to a sales slip.

Mark down: to lower prices.

Mark up: to increase prices.

Merchandise: the goods or items that are for sale.

Receipt a written or printed statement that shows how much was paid for a product or service.

ANSWER SHEET

Practice Exercise A

1. $ 2.52
2. $ 0.67
3. $ 11.08
4. $ 0.05
5. $ 5.88
6. $ 11.05
7. $ 1.04

Practice Exercise B

8. $ 3.77
9. $ 15.85
10. $ 17.09
11. $ 38.24
12. $ 34.88

Practice Exercise C

13. $ 101.19
14. $ 7.58
15. $ 36.16
16. $ 32.99
17. $ 10.32

Practice Exercise D

18. $ 15.20
19. $ 3.60
20. $ 18.80
21. $ 1.23
22. $ 20.03

Practice Exercise E

23. $ 2.19
24. $ 4.44
25. $ 4.67
26. $ 3.58
27. $ 4.15
28. $ 4.10
29. $ 4.20
30. $ 0.55
31. $ 2.70
32. $ 5.09

Practice Exercise F

33. $ 3.60
34. $ 4.44
35. $ 9.59
36. $10.94
37. $13.38

Practice Exercise G

38. $34.39
39. $32.09
40. $51.18
41. $ 9.71
42. $12.45

Practice Exercise H

43. $25.00
44. $ 3.20
45. $28.20
46. $ 1.27
47. $29.47